

AMENDMENTS TO THE CLAIMS

Please amend the claims as follows.

1. (Currently Amended) A method of controlling the coupling of multi-platform reservoir and network simulators comprising:

initiating a first reservoir simulation for a first reservoir in a first reservoir simulator, the first reservoir simulation using a first fluid model;

initiating a second reservoir simulation for a second reservoir in a second reservoir simulator, the second reservoir simulation using a second fluid model;

synchronizing the advancement through time of the reservoir and network simulators first reservoir simulation executing on a first computing device computer and the second reservoir simulation executing on a second computing device;

translating each of a plurality of hydrocarbon fluid streams a first hydrocarbon fluid stream of the first reservoir simulation and a second hydrocarbon fluid stream of the second reservoir simulation to a common fluid model of a controller by converting pseudo-components of each of the plurality of hydrocarbon fluid streams first hydrocarbon fluid stream and the second hydrocarbon fluid stream to a super-set of pseudo-components used in the first reservoir simulator and the second reservoir simulator the reservoir and network simulators executing on the computer; and

performing a production operation based on the first reservoir simulation of the first reservoir simulator and the second reservoir simulation of the second reservoir simulator simulations of the reservoir and network simulators of a reservoir, the first reservoir simulation simulations performed on the first computing device computer and the second simulation performed on the second computing device using the converted hydrocarbon fluid streams.

2. (Currently Amended) A controller for coupling multi-platform reservoir and network simulators comprising:

means for initiating a first reservoir simulation for a first reservoir in a first reservoir simulator, the first reservoir simulation using a first fluid model;
means for initiating a second reservoir simulation for a second reservoir in a second reservoir simulator, the second reservoir simulation using a second fluid model;
means for synchronizing the advancement through time of the ~~reservoir and network simulators~~ first reservoir simulation executing on a first computing device and the second reservoir simulation executing on a second computing device;
means for translating each of ~~a plurality of hydrocarbon fluid streams~~ a first hydrocarbon fluid stream of the first reservoir simulation and a second hydrocarbon fluid stream of the second reservoir simulation to a common fluid model of the controller by converting pseudo-components of each of the ~~plurality of hydrocarbon fluid streams~~ first hydrocarbon fluid stream and the second hydrocarbon fluid stream to a super-set of pseudo-components used in the first reservoir simulator and the second reservoir simulator ~~the reservoir and network simulators~~; and
means for performing a production operation based on the first reservoir simulation of the first reservoir simulator and the second reservoir simulation of the second reservoir simulator ~~simulations of the reservoir and network simulators of a reservoir, the first reservoir simulation~~ simulations performed on the first computing device and the second simulation performed on the second computing device using the converted hydrocarbon fluid streams.

3. (Currently Amended) The controller of claim 2 additionally comprising means for apportioning global production and injection constraints between simulation tasks of the first reservoir simulator and the second reservoir simulator ~~reservoir and network simulators~~.
4. (Original) The controller of claim 3 additionally comprising means for balancing reservoir and surface networks.

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5. (Canceled)